

CLAIMS

1. A method of automatically grading an article of a given type, in particular an article of a garment type, that is formed by assembling a plurality of pieces, said method comprising:

using a grading mask having images of the pieces of a reference article of the same type as the type of the article to be graded and for a given base size, a plurality of geometrical grading regions, each of which contains one or more characteristic points of a piece of the reference article, and grading formulae associated with respective ones of the various regions, each grading formula making it possible, in the associated grading region, and as a function of the variation in one or more magnitudes of a scale of measurements, or of a predetermined increment value, to determine a displacement to be applied to each characteristic point contained in said region for going from the base size to another size;

calling up the images of the pieces of the article to be graded for an article size corresponding to the base size of the grading mask;

placing the images of the pieces of the article to be graded on the grading mask in positions corresponding to the positions of the pieces of the mask; and

automatically grading the pieces of the article to be graded on the basis of the grading formulae of the mask and of a chosen scale of measurements for the article to be graded.

2. The method according to claim 1, wherein the one or more characteristic points of the piece of the article to be graded is included in a plurality of grading regions

of the grading mask, the grading formulae of each of said grading regions apply cumulatively to the one or more characteristic points.

3. The method according to claim 1, wherein the step of placing the images of the pieces of the article to be graded in correspondence with the images of the pieces of the grading mask is followed by revising one or more grading regions of the mask so that each grading region that includes the one or more characteristic points of the piece of the mask also includes the corresponding one or more characteristic points of the article to be graded.

4. The method according to claim 2, wherein the step of placing the images of the pieces of the article to be graded in correspondence with the images of the pieces of the grading mask is followed by revising one or more grading regions of the mask so that each grading region that includes the one or more characteristic points of the piece of the mask also includes the corresponding one or more characteristic points of the article to be graded.

5. The method according to claims 1, wherein the grading mask also includes one or more special grading regions, each of which includes an outline portion of a piece of the grading mask and at least one special grading formula associated with each special grading region and specifying a constraint to be applied to the portion of the outline during the grading, and, during the grading, the special grading formula associated with a special grading region that contains one or more outline portions of the piece of the article to be graded is applied to the or to each outline portion.

6. The method according to claim 2, wherein the grading mask also includes one or more special grading regions, each of which includes an outline portion of a piece of the grading mask and at least one special grading formula associated with each special grading region and specifying a constraint to be applied to the portion of the outline during the grading, and, during the grading, the special grading formula associated with a special grading region that contains one or more outline portions of the piece of the article to be graded is applied to the or to each outline portion.

7. The method according to claim 3, wherein the grading mask also includes one or more special grading regions, each of which includes an outline portion of a piece of the grading mask and at least one special grading formula associated with each special grading region and specifying a constraint to be applied to the portion of the outline during the grading, and, during the grading, the special grading formula associated with a special grading region that contains one or more outline portions of the piece of the article to be graded is applied to the or to each outline portion.

8. The method according to claim 7, wherein the special grading formula expresses a constraint chosen from at least one of the following outline portion constraints: shape constraint, length constraint, and orientation constraint.

9. A method of creating a grading mask for automatically grading articles of a given type, in particular articles of a garment type, that are formed by assembling a plurality of pieces, said method comprising:

using images of the pieces of a reference article of the given type for a given base size;

positioning the images of the pieces of the reference article in a plane;

creating grading regions, each of the grading regions being defined by a geometrical zone of the plane and containing at least one characteristic point of the piece of the article; and

associating each grading region with a grading formula making it possible, in the associated grading region, and as a function of the variation in one or more magnitudes of a scale of measurements, or of a predetermined increment value, to determine a displacement to be applied to each characteristic point contained in said region for going from the base size to another size.

10. The method according to claim 9, wherein the method further comprises creating one or more special grading regions, each of which includes a portion of the outline of the piece of the mask, and in associating each special grading region with at least one special grading formula specifying a constraint to be applied to the portion of the outline during grading.

11. A grading mask for automatically grading articles of a given type, in particular articles of the garment type, that are formed by assembling a plurality of pieces, said mask comprising images of the pieces of a reference article of the same type as the type of the article to be graded and for a given base size, a plurality of geometrical grading regions, each of which contains one or more characteristic points of the piece of the

reference article, and grading formulae associated with respective ones of the various regions, each grading formula making it possible, in the associated grading region, and as a function of the variation in one or more magnitudes of a scale of measurements, or of a predetermined increment value, to determine a displacement to be applied to each characteristic point contained in said region for going from the base size to another size.

12. The grading mask according to claim 11, wherein the grading mask further comprises one or more special grading regions, each of which includes a portion of an outline of the piece of the mask and at least one special grading formula associated with each special grading region and specifying a constraint to be applied to the portion of the outline during the grading.

13. A set of grading masks as defined in claim 11, wherein the grading masks are in a digital form.

14. A set of grading masks as defined in claim 12, wherein the grading masks are in a digital form.